THE HORTICULTURIST
EDITED BY
HENRY T. WILLIAMS.
E. SEARS & CO.

VOL. 26. MAY, 1871. NO. 299

Profits of Small Fruits.

An Essay delivered before the Annual Meeting of the Pennsylvania Fruit Growers' Society, at Chambersburg, Jan. 18th, 1861.

BY WM. PARRY, OF CINNAMINSON, N. J.

(Continued.)

BLACKBERRIES.

BLACKBERRY bushes, formerly considered a nuisance, are now highly appreciated and extensively cultivated, many farmers growing more acres of them than of corn and wheat together.

It is somewhat remarkable that in this age of horticultural progress, there have been no seedlings raised better than those found growing wild on the commons, without care or culture. Attempts have been made to get blackberry bushes without thorns, and some have been found with canes nearly smooth, which created quite a sensation for a time, and the plants sold readily at five dollars each, until it was ascertained that the fruit was as much deficient as the thorns. Various colors have been brought out, White, Red and Purple, which were novelties in their way, but of no practical value in point of profit to fruit growers.

After carefully cultivating and testing twenty-six varieties, in addition to a large number of seedlings which were no better than parent stock, I have retained four, which are all valuable as field crops for market.

Wilson's Early.—At the head of the list I name Wilson's Early, the largest blackberry in cultivation, ripening early, close after raspberries, before peaches are in market; when fruit is scarce it commands the highest price. Two years since, we sold the principal part of our crop from ten acres, at fifty cents per quart wholesale, which were afterwards sold in smaller quantities as high as one dollar per quart. This variety is being extensively cultivated. One fruit grower in West Jersey, having seventy-five acres of them in bearing, received the past year $20,000 for the

fruit, realizing a clear profit, after deducting expenses, of $14,000, gathered within the space of three weeks' time.

Dorchester.—Next in point of *profit* to the Wilson's Early is the Dorchester, which has an upright, strong growing bush, tall, erect and perfectly hardy. For twelve years past they have done well with me, never being injured by the winter even when the New Rochelles were mostly destroyed. They have always yielded good crops of fair sized berries, long, shining black, sweet and firm, so as to carry well to market—and being early, they sell higher than the Kittatinny, New Rochelle, or any other late ripening blackberry which follows them.

This variety is well adapted to planting in orchards of apple, cherry or peach trees; being straight, upright growers, the bushes are less in the way of cultivation than other varieties that curve out from the rows and obstruct the passage between them. The protection afforded by the trees, both in winter and summer, is beneficial.

In 1863 I planted an apple orchard, forty feet apart each way, then a row of Early Richmond cherries each way between them, requiring three times as many cherries as apples, then a row of Dorchester blackberries in the rows of trees and between them, which left them at the proper distance of ten feet apart. They have all done well; the apple trees have made a fine growth and borne some fruit; the cherries and blackberries have yielded fine crops of fruit every year since old enough. The cherries ripen first, and are out of the way before the blackberries commence, so that the draft upon the land is not so great as if both crops ripened at the same time. The earliest and finest Dorchester blackberries raised in our section are grown in old apple orchards.

In the spring of 1864 I sold a fruit grower near Burlington, N. J., Dorchester blackberry plants for two and a half acres, which were set among peach trees on new land, light and sandy, from which the pine timber had been recently removed. In 1865 they commenced fruiting, yielding about enough to pay tillage—the space between the rows being profitably occupied with tomatoes and other vegetables for market.

In 1866 they produced, exclusive of commissions	$600 00
In 1867	1,300 00
In 1868	2,057 64
Total in three years	$3,954 64
Deduct cost of picking	287 64
Leaving	$3,670 00

clear profits above the cost of picking and commissions; or an average of $480 per acre for each of the three years in bearing.

In addition to the sale of fruit, large quantities of plants were dug and sold, more than enough to pay for the original stock to commence with. This is a better average for profit than usual; and one cause of the large returns was, that blackberries in many places were badly winter killed, the Dorchesters standing the cold better than other varieties, and especially when planted in orchards and protected by the trees.

The Kittatinny comes next in order as a profitable berry to grow for market. It is perfectly hardy, large, luscious, and very productive. And last,

The New Rochelle, which has been in cultivation longer than the others, but is now superseded by them.

Blackberries are among the most profitable fruit crops; their easy culture, hardiness, productiveness, and the high price at which the fruit sells, gives them a great advantage over others requiring more expensive cultivation. They are not particular as to soil or location, but will yield well where ordinary crops will grow.

It is not necessary to select the best land for a plantation, as the canes would there grow so large and rank as to require much time and labor to trim and keep them within bounds. They need but once planting, as the bushes renew themselves annually thereafter, by sending up a spontaneous growth of young suckers to bear fruit the following year; and with an occasional dressing of manure, they will continue to give large returns for many years.

I have grown on ten acres, for several years, from 650 to 700 bushels, and one season 800 bushels, being an average of over seventy bushels per acre, while land adjoining, equally good, planted with corn, did not yield fifty bushels per acre.

Preparation of the Ground.—The land should be ploughed and harrowed smooth; then open furrows eight feet apart; if muck is convenient, it is valuable to spread along them; then set the plants about four feet distant, on the muck. The roots will mostly follow along the row to feed on the muck, and grow more vigorously than lateral or side roots. Hence, the strongest and best plants will come up along the row, nearly where they are wanted to produce fruit the following year. They should not be left to stand closer together than an average of one plant to a foot in length in the rows.

Pruning.—The plantation should be gone over several times during the summer, and the tops of the young canes, as they appear above the bearing bushes, should be shortened in, so as to keep them at a uniform height of about three to five feet, according to their strength. This will cause the side branches to grow vigorously and develop fruit buds near the ground, and interlocking with each other, the bushes will support themselves, and avoid the necessity of stakes and wires to prevent high winds from injuring them. The side branches should be shortened in the following winter or spring.

Plants thus trimmed will yield more fruit and of better quality, than if left to grow tall and slender, as by nature they are inclined to do.

I have sometimes left a few rows without pruning, and others pruned but little, which fully illustrated the great importance of shortening in the branches. The unpruned bushes would bear more fruit than could be ripened on them; it would remain red a long time, and finally dry up, being of no value. The best and earliest fruit would be on the bushes well pruned so as to throw the whole strength of the roots into fewer berries.

Price of Berries and Profit.—The average price for ten years past of the blackberries we have sold of all kinds, has been fifteen and six-tenths cents per quart, which gives about the following result per acre:

2,000 quarts per acre, at 15.6 cents		$312
Commissions, 10 per cent	$31 20	
Picking, at 1½ cents per quart	30 00	
Interest on land	10 00	
Use of boxes	10 00	
Pruning, cutting, &c	30 80	
Net profit per acre	200 00	
	$312 00	$312

(TO BE CONTINUED.)

A Model Suburban Cottage.

BY GEO. E. HARNEY, ARCHITECT.

THIS house was designed for a lot sixty feet wide on a village street, and should be placed quite near the line on the left hand side of the lot, leaving the wide open space on the other side for a road or paths, and grass and trees.

It is designed to be built of wood, with a cellar underneath it, the cellar floor being only three feet below the surface of the ground, on account of dampness, making the principal floor about five feet above the grade. A part of this five feet is banked up, forming a grass-terrace all around the house, and the balance is made up by the brick under-pinning.

The veranda is reached by steps, as shown in the perspective, and from it we enter the front door.

The rooms on the principal floor are: a parlor, No. 2, fifteen feet square, not including the bay window; No. 3, a kitchen of the same size; No. 4, a bedroom 10 by 13, having in it a closet at the side of the chimney; No. 5, a pantry or sink room; and No. 6, a store room. The pantry has a pump and sink, and the store room is fitted up with shelves and cupboards. The stairs are in the front hall, and under the principal flight is the stairway to the cellar. The second story has three bedrooms, two good sized dressing rooms, and a convenient bathing room.

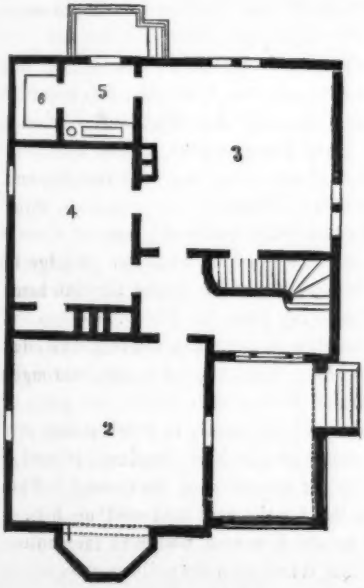
The frame is made of hemlock, the walls are filled in with brick laid on edge in mortar, and the side with narrow, clear pine siding. The roof is covered with hemlock boards, and shingled with sawed cedar or pine shingles.

The projection of the eaves is three and a-half feet, and the gables have sawed edgings or verge boards. The inside is lathed and plastered and hard finished throughout. The floors are of pine floor plank.

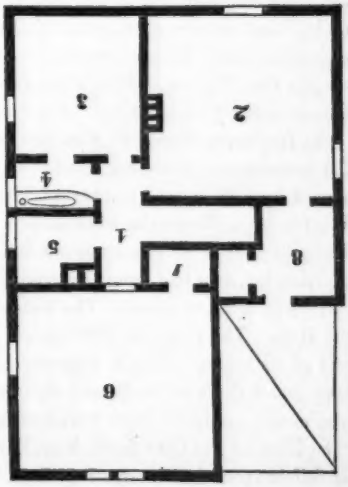
The bases are six inches high, moulded, and the window and door trimmings are four and a-half inches wide, moulded. The doors are all four panelled, one and a quarter inches thick, moulded on the exposed side, and all have locks and brown mineral trimmings. The closets all have shelves and drawers and clothes hooks. The principal story is nine feet high, and the chambers nine feet high in the centre, and five feet in the eaves.

The cottage can be built for $2,500.

Design for a Suburban Cottage.



First Floor.



Second Floor.

Noted American Trees, Past and Present.

BY THOMAS CAVANAGH.

AN interesting volume might be written upon this subject, full of romance and stirring incidents, connected with the early days of the colonies. Many of the old landmarks have passed away; time, or the axe of the modern improver, has laid them low, and in a few years the remaining ones will have departed and be soon forgotten, or only thought of in traditions of the past. Europe boasts of her lordly trees, and the skill of her scientific horticulturists is taxed to the utmost to invigorate and prevent from decaying some noted and historical tree. The oldest tree in Europe is the Cypress of Somna, in Lombardy. It flourished in the reign of Julius Cæsar, and is, therefore, nearly two thousand years old. It is one hundred and six feet in height, and twenty feet in circumference. Napoleon, who had no great respect for sacred things, in his march through Italy, altered the plan of his road over the Simplon, to avoid injuring this tree; this, in our estimation, atones for many of his acts of vandalism. A few years ago we could boast of a still more ancient tree, the Wellingtonia Gigantica; or, as it should more properly be called, the Washingtonia Gigantica, the famous big tree of Calaveras county, California. This mighty monster of the forest has passed away. The Indians had, for ages, been in the habit of assembling under this tree upon their return from the chase or foray, and while relating their exploits, the squaws were cooking their food at its base. In course of time it became so much decayed that it was cut down, in 1850. It measured, in length, 300 feet, a portion of its top having been blown off some years previous. It measured, in circumference, over 90 feet. One section of it was hollowed out and sent to the London Exhibition. In this section a party of six sat down and partook of a repast. The bark of this monster tree was eighteen inches in thickness. Among the trees now standing in the valley, may be mentioned the Sentinels, 300 feet high and 69 feet in circumference, and the Pioneer's Cabin, 318 feet high and 73 feet in circumference. In contrast to this noble tree is the Stunted Pine, called by travelers the One Thousand Mile Tree, from the fact of its being the only tree between Omaha and Salt Lake City. On this account it is celebrated.

At Roxbury, Mass., an Elm tree one hundred and fifty years old was cut down a few months ago, it having become so decayed as to be considered unsafe. All means should have been used to preserve this tree, for on one of its limbs the lamented Warren hung his scythe when he left his swarth to lay down his life for his country. The past year an Elm tree was cut down in Vermont, with a trunk measuring seven feet in diameter, two feet from the ground. It was three hundred years old, and made thirty-six cords of wood. The historic old Elm of Boston still stands, the pride of the Hub. The storm of 1860 shook it severely, and still later, in 1869, it lost several of its limbs. This is supposed to be the oldest tree in New England, it having been found there a sturdy and vigorous tree, by the founders of the Colony. This tree would, no doubt, have perished long since, but for the care bestowed upon it.

In front of the City Hall, New York, stood an old Elm tree, not much larger than its fellow trees, but interesting, from the fact that it had been the gallows upon which several patriots had met an ignominious fate during the reign of Provost Marshal

Cunningham, of infamous memory. This tree was surreptitiously removed one night, a few years ago, on account of its interfering with the movements of the military, when being reviewed by the civil dignitaries of the city. Within a short time the city has lost another old landmark, the old Varian Buttonwood, which stood on the sidewalk on Broadway, near Twenty-sixth street. This tree was planted between the years 1625 and 1630, thus making it two hundred and forty years old. It was the only surviving one of a row which had been planted by one of the old Dutch settlers. This part, of what is now the centre of the city, was then considered almost as far in the country as Yonkers is at the present day. The old tree became decayed, in consequence of its roots being confined by pavements and stone walls, and was cut down, much to the regret of the old citizens, and the relief, no doubt, of the proprietor of the house before which it stood. If proper care had been taken of this tree, it would probably have stood for another century.

The most interesting tree in New York was the Stuyvesant Pear tree, planted by the sturdy old silver-leg Governor of New York, or New Netherlands, as it was then called. What is now one of the great thoroughfares of the city, and within a stone's throw of the noble Cooper Institute, was then the Bowrie farm of Peter the Headstrong. This tree was imported from Germany in 1647. It blew down several years ago, and its place is supplied by a scion taken from it. This tree possessed great vitality, and was sufficient proof that fruit does not degenerate through age. We have seen it filled with snowy blossoms and fair-looking fruit up to the year of its fall. At the corner of Twenty-fourth street and Third avenue, stood, until the year 1860, a celebrated Willow tree, which had a romantic history attached to it. A friend of Pope's sent him a box of figs from Smyrna. Upon opening the box he found a small twig, which he planted. It grew, and in course of time it became a vigorous tree. When the Revolution broke out in this country, and King George sent his hirelings to crush it, some of his officers came to make a long stay, calculating to take possession of some of the confiscated estates of the rebels. One of the officers brought a few twigs of this Willow from Pope's garden at Twickenham. Upon arriving in this country he soon saw the situation, and as there had been no confiscation of land, nor, in fact, any likelihood of there being any for some time, he presented his cutting to Mr. Curtis, Washington's step-son. They were planted by him, on his demesne in Virginia, and grew finely. After the war, General Gates came to New York, and settled on a farm at a place then called Rose Hill. He brought slips from these trees, and planted one of them at the entrance to his grounds, and there it stood for eighty-four years. This tree was, no doubt, the parent stock of a large portion of what is commonly known as the Weeping Willow of this country.

All readers of American history will remember the romantic incidents connected with the capture of Major Andre. When the brave men, who scorned to be bribed, seized Andre, they took him under a large Oak tree, that stood by the side of the post road leading from New York to Albany, and there searched him, with what results history has told us. Arnold, the principal, escaped to England, and died without a friend. The very day the news of his death reached this

country, this silent witness of one of the most stirring incidents of the Revolution was struck by lightning and killed.

Long Island is not particularly noted for any celebrated trees. The remains of an old Oak, under which George Fox, the celebrated Quaker, preached, stands nearly opposite the entrance to Mr. Parson's nursery in Flushing. The trunk of this tree measures fifteen feet in circumference, and is supposed to be about 300 years old. The old mansion in which Mr. Parsons resides was built in 1661. It was then a large and vigorous tree.

At Stony Brook, Long Island, there is a Buttonwood tree, which one of our friends measured; it is thirty feet in circumference. The oldest inhabitant of that village died some time ago, and, unfortunately, neglected to leave a record of its age.

On Fulton avenue, in the city of Brooklyn, stood, up to a few years ago, a monster Buttonwood. It was one of the noblest specimens of the Platanus that we ever saw. This variety of tree was held in great favor by the ancient Romans, and, underneath its umbrageous branches, Aristotle, Plato and Socrates held forth to the multitude who assembled to hear the words of wisdom which they uttered. Pliny tells us of one of these trees, that was of such a size, that one of the Governors, with eighteen of his retinue, feasted in the hollow of its trunk. One of these trees, growing near Marietta, Ohio, some years ago, was forty-seven feet in circumference, four feet from the ground. Our Brooklyn tree was not quite so large when it was cut down; it measured eight feet in diameter. Mr. Debroise, upon whose estate it stood, stated, in 1848, that when he was a boy, it was seemingly as large as it was at that time; he was at that time nearly ninety-nine years old. The concentric rings, by which a tree's age is determined, were two hundred and seventy-five, as far as we could count; but we should judge it to be at least three hundred years old. This tree was, no doubt, the next largest to the Sycamore, which stands on the Seakonnet channel, and is the largest tree in Rhode Island. It measures thirty-two feet in circumference, and is the sole survivor of all the trees which were in that vicinity during the Revolution. The only large trees now standing within the limits of the city are three Buttonwoods, on the Jamaica road, near our residence. They are fine trees, measuring twenty-one feet four inches in circumference. These trees were planted by some of the ancient proprietors, years before the city was ever thought of, and when the inhabitants lived in blissful ignorance of political rings.

There are two Oak trees in Salem county, New Jersey, which are noble specimens of this kind of tree. The original growth of timber in this county is nearly gone, but these Oaks remain to show the wonderful fertility of the soil. One of these trees, standing on the outskirts of the town, measures twenty-six feet in circumference, and is over one hundred feet in height; the other stands in the centre of the village churchyard, and its branches cover the graves of those who, no doubt, sought its grateful shade hundreds of years ago.

Among the most celebrated trees of this country, that have passed away, was the Charter Oak, of Hartford; the sanctuary of the charter of the good old State of Connecticut—in late years celebrated for its wooden nutmegs and hams. This famous tree was twenty-five feet in circumference, and was, no doubt, over six hundred years

old. Shortly after its fall, relics of it were eagerly sought after, and candor compels us to say, the supply was equal to the demand. The Cape Ann Cedar is one of the noted trees of which New England boasts. Fine specimens of the Cedar are to be found occasionally along the line of the New England coast; but this one, in particular, is worthy of mention, growing among a mass of rocks, with nothing more fertile than sea sand, stunted in form; but what it lacks in height is more than compensated for by its strong trunk, of over six feet in circumference. The storms of centuries have passed over it, yet there it stands, a silent monitor to us, of what can be done under the most adverse circumstances.

At Shiloh, Cumberland county, New Jersey, there is an American Holly—*Ilex Opaca*—over one hundred years old. When we take into consideration that the Holly, on account of its slow growth, is rarely used as an ornamental tree, this tree is remarkable. We hope the day is not far distant when the Holly will be sought after as a hedge plant.

Many tourists, in passing up the Hudson, have, no doubt, contemplated with interest the ruins of Fort Edward, a portion of which was destroyed by fire in the year 1756. Close to the water gate, on the banks of the Hudson, stood a Balm of Gilead, or Populus Candicans. It was, up to a few years ago, one of the finest specimens of this variety of tree in the country. It measured, in 1850, twenty feet in circumference at ten feet from the ground. This noble tree was spared from the ravages of the fire when the fort was burnt. Fort Edward, it will be recollected, was also the scene of the massacre of Jane McCrea. The tree under which this took place is passing away. It was formerly a noble pine of five feet in diameter, but the storms of a century have left it but a shattered relic of the past.

In connection with celebrated trees, it may not be out of place to give a passing notice to the celebrated Liberty Tree of Boston, which was destroyed by the British during the siege. It stood on the corner of Washington and Essex streets; a fac simile of it is sculptured in stone, and placed in the niche of the house which is built on the spot where it grew. When it was cut down, a soldier, who happened to be up in the tree, was killed by the fall—a just retribution. The following lines were written upon the affair:

"Now shined the gay-faced sun with morning light,
All nature gazed, exulting at the sight,
When swift as wind, to vent their base-born rage,
The Tory Williams and the Butcher Gage
Rush'd to the tree, a nameless number near,
Torics and negroes following in the rear;
Each, axe in hand, attack'd the honor'd tree,
Swearing eternal war with Liberty;
Nor ceas'd his stroke till each repeating wound
Tumbled its honors headlong to the ground;
But ere it fell, not mindless of its wrong,
Avenged, it took one destined head along.
A Tory soldier on its topmost limb;
The genius of the shade look'd stern at him,
And marked him out that self same hour to dine
Where unsnuff'd lamps burn low at Pluto's shrine;
Then tripped his feet from off their cautious stand;
Pale turn'd the wretch—he spread each helpless hand,
But spread in vain—with headlong force he fell,
Nor stopp'd descending till he stopp'd in hell."

The old Oak at Long Meadows, Massachusetts, under which, tradition tells us, the oldest inhabitants made their treaties, thereby securing valuable tracts of land, for the consideration of a few pewter buttons and elegant strings of pearls and gold beads, made of glass. This noble old tree succumbed last year to the ravages of time and want of care on the part of the civil dignitaries of the town. It was principally interesting on account of its great age. It measured twenty-four feet in circumference, and was supposed to be at least 300 years old.

Massachusetts has been particularly favored in the matter of big trees, if in nothing else. In front of the Watson House, at Spencer, there stood, for one hundred and twenty-nine years, a noble old Elm. It was so badly damaged by fire when the hotel was burned, that it had to be cut down. It was interesting from the fact, that for a number of years a pair of foxes took up their abode in a hollow of the trunk, and resided there without fear or molestation; a fact which speaks volumes for the ubiquitous small boy and the curs of the neighborhood.

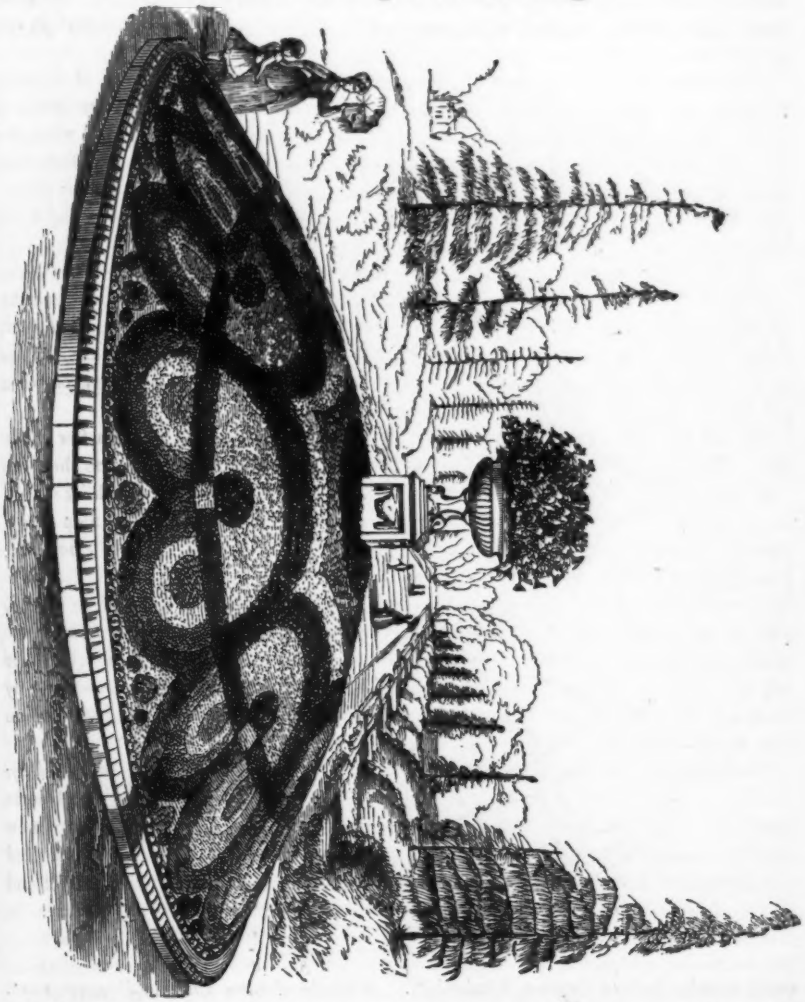
Newburgh prides itself on having a big tree. It is a noble specimen of the Balm of Gilead. It stands on the road to Marlboro. It measures, at two feet from the ground, nearly twenty-four feet, and its branches extend over one hundred feet. There is no record as to whether it grew there spontaneously, or was planted by the grandfather of that celebrated individual who, it is said, has no memory of when celebrated local events took place.

An old relic of the memorable battle of New Orleans was cut down a few weeks ago. This was the historic Pine, on the Isle Aux Pois, and well known as the English look-out tree, from its having been used as a post of observation by the English, on their retreat from that disastrous field, where seven hundred brave men found, instead of beauty and booty, only a grave. This tree, being on the line of a new railroad, was sold to the proprietors of a saw-mill. It was over one hundred feet in height, eighteen feet in circumference, and supposed to be two hundred years old. The Rebellion has furnished us with a few trees which are interesting, from some event transpiring near them. At South Mountain, on the spot where General Reno fell, is a noble specimen of the Chestnut. The trunk of this tree is perforated by hundreds of bullets; yet there it stands, seeming uninjured, marking the spot where a brave man fell.

When Sherman commenced his celebrated march to the sea, he found it necessary, at times, to make observations of the country, and his scouts always selected some large tree for this purpose. At Atlanta, there is a large Pine tree, which is now called Sherman's Signal Tree. To make it easier of ascent, there are cleats nailed to the trunk, from the ground to the extreme top—a height of some one hundred and seventy feet. It measures about fifteen feet in circumference. Many of the trees in that section are decorated with what the boys in blue called the Jeff. Davis neck-tie. These were formed by twisting red hot railroad iron around the trunks of large trees. These collars are not easily removed, and in some years' time, when many of the incidents of the war will have been forgotten, it will be a matter of much speculation as to the object for which they were placed there. The most celebrated tree of the present day is the Apple tree at Appomattox Court House, under which Generals

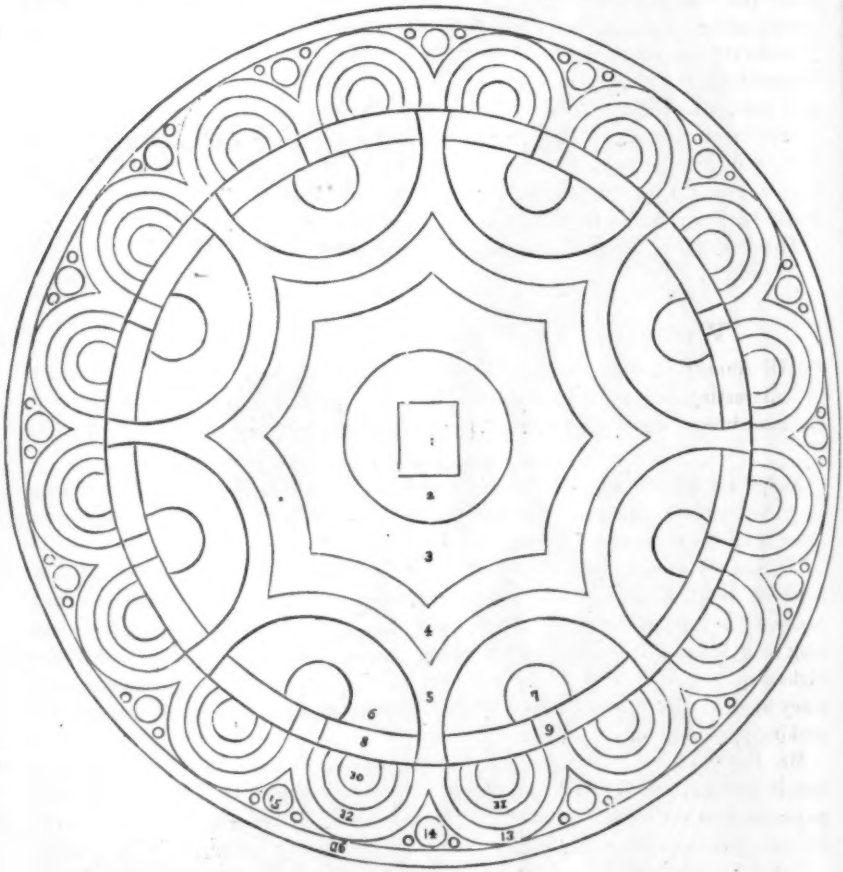
Grant and Lee met to settle the terms which were to send to their peaceful homes thousands of men who had gone to battle for their country.

A Fine Example of Bedding.



IN the Royal Gardens at Kew, near London, England, there was exhibited, last summer, a remarkable example of arrangement in bedding plants. The illustration represents a large round bed, at the end of the broad central walk. The central vase(1) was of a very elegant design, and filled with Pelargoniums, with a tall

Humea Elegans in the centre. Around the base of the vase was a circle of Perilla(2). This was enclosed within an octagonal-shaped mass of Pelargonium Waltham Seedling(3). This octagon was again bounded by a double belt of Centaurea Candida inside(4), while the semi-circles extended outward(5) were planted with Coleus Verschaffeltii. The concave spaces(6) within the semi-circles were filled with beds of Mrs. Pollock Geranium, which, in themselves, surrounded another



Plan for a Flower Garden.

small circular bed of Iresine Lindeni(7). A circle of blue Lobelia(8) came next, and ran around the whole bed, broken opposite to the centre of the semi-circle by plants of Sempervivum Canariense and S. Arboreum Altropurpureum(9), which proved too large for their position. Outside the circular bell(8) are a series of concentric semi-circles, with their convexities directed outward. The centre of those

semi-circles(10) consists of Echeveria Metallica, and an undergrowth of Alternanthera Amabilis and Sempervivum Urbicum. This is surrounded by a belt of Golden Feather Pyrethrun(11), which, in its turn, is encircled by a belt of Echeveria Secunda glauca(12), next to which comes a brilliant and effective zone of Althernanthera Paronychioides(13). The sides of the triangular recesses(14, 15) left between the contiguous semi-circles are composed of Golden Feather Pyrethrun, while the base of the triangle is formed by the edging(16) of Echeveria Secunda glauca, which runs round the entire bed, inside the moulding. In the centre of the triangle(15) are plants of Echeveria Metallica, Sempervivum Californicum, Senecio Pyramidalis, S. Sempervivum Arachnoideum, Althernanthera versicolor. In alternate beds, Pachyphytum Roseum is substituted for the Senecio.

It is hardly necessary to say that the display was most striking, and would have been, undoubtedly, more effective, had not the lower and outer portion of the rim been so crowded. An arrangement a little more simple, with a less variety of plants, would have produced a more splendid coloring and contrast.

The diameter of the mound is 40 feet, and circumference 120 feet.

Western New York Horticultural Society.

THE Annual Meeting was held at Rochester, N. Y., Jan. 18 and 19, at which interesting discussions took place. We are able to present condensed reports of the most interesting topics brought up and discussed. Special attention was paid to

The Marketing of Fruits.

Judge La Rue thought that fruit growers were often at fault in the quality of fruit they ship, and recommended the division of all fruit into extra first class and second class, with the name of the grower upon each package.

Mr. Brooks said Western New York apples were superior to those grown in any southern locality, and it would pay us to make a selection of the very best and demand fancy prices for them. He did not believe in the present tendency of running to Baldwins, Greenings, Twenty Ounce, apples and others that are not of the highest quality. We should encourage paying a higher price for Spitzenbergs and fancy apples. He thought second quality apples should be largely in demand for cooking purposes.

Mr. Hayward said packing apples was a very difficult process. He had taken great care in packing, and yet had not always succeeded in satisfying shippers. We had no encouragement in making extra first class apples. The dealers and consumers will not take them at a price that will pay for doing it.

Judge La Rue thought that fruit growers who had large quantities of apples should be their own shippers, the same as grape growers did. He frequently had orders for brands of grapes which consumers liked. The fruit interest in Western New York is increasing so that it will in a few years be greater than all other interests. When he first commenced raising grapes he could not get any market for a ton. Next year he sold at nine cents, and in two or three years the price went up to thirty cents a pound. Last year, owing to the increased production, he got only fifteen cents a

pound; but he could grow them for two cents a pound. The cost of production was not more than one cent per pound.

Mr. Quimby thought that apples were often much injured by carelessness in picking. Mr. Robert Bell, on the Hudson, has the largest orchard of Newtown pippins in the State. The apples are picked with great care, and assorted carefully. His best apples are packed in small casks and shipped to England, where they sold at $8 and $10 per half barrel. The 2d quality were sold in New York. The refuse apples were made into cider and sold for $8 and $10 per barrel to champagne manufacturers.

What fruits shall we now plant extensively for profit?

Mr. Moore said the Roxbury Russett was one of the most profitable varieties of apples.

Mr. Beadle said apples were most profitable. He thought there was more money in apples than in any other fruit.

Mr. Hoag thought that this Society should not confine itself to one single variety. He had grown all kinds of fruits with profit except the plum. There are very few varieties of apples, especially in old orchards, that are really profitable.

Mr. Wagner thought that apples and all kinds of fruits could be grown with profit, but with him grapes were most profitable. He sold at home from four to eleven cents per pound, and those he shipped, sold from eight to sixteen cents per pound. The yield averaged four tons per acre.

Mr. Quimby said he raised about 10,000 pounds of Isabella grapes from two acres which were not in full bearing, and he sold them in Rochester for $500, which he thought paid well enough.

Oliver Chapin only netted two cents per pound for grapes on the vines. This hardly paid expenses. His apple orchard had not paid very well. His apple trees planted thirteen years ago had never brought a crop worth picking. Baldwin trees twenty years old had only borne three good crops. He had forced the trees as fast as possible so as to get them out of the way of the borers and of mice. It cost about $1,000 an acre to cultivate an apple orchard twenty years without cropping. He hoped his apple orchard would pay some time, but it had not yet.

Mr. Chapin had made considerable profit from Bartlett pears—more than he could have made from ordinary farming or grapes. He only grew the Isabella; one-half the seasons he got a good crop. The profit had been good. This year, at two cents per pound, it paid as well as a wheat crop. The average price, until this year, was five cents per pound as they hung on the vines. The profit had been at least one hundred dollars an acre, which was better than any other crop.

Mr. Barry, of Rochester, thought much depended on the marketing of fruit. Grapes sold last fall at one and a-half or two cents per pound, while if they had been kept a month later they would have brought five or ten cents a pound. He thought Mr. Chapin's apple orchrad was exceptionally unprofitable. He averaged $9 a barrel for pears, which was very profitable. He sold two barrels of Lady apples at $15 each, and if he could have kept till Christmas, he could have got much more. He had sold Josephine De Malines pears in winter for as high as $25 a barrel.

Mr. Brooks thought the apple was worth all other fruits, but other fruits should not be neglected. Fruit growers should not be discouraged by a few failures.

Mr. Quimby said the demand for grapes at this season of the year was very great, and they would command an extra price. He wanted to know how they could be kept.

Mr. Babcock kept grapes for family use, but not for market. Some varieties would not keep well. The Delaware and Concord were of this class.

Isabellas, Catawbas, Ionas and Rogers' Hybrids are mostly good keepers. If packed in boxes they should be kept in a cold room—not freezing—and covered with something to absorb the moisture.

Mr. Jones, of Geneva, thought we should study the tendency of the market, so that we could forecast the probable demand. We are to compete with California fruits grown at low rates. Here we should turn our attention to long keepers. The perishable varieties of fruits have not been profitable. The Bartlett is so poor a keeper that it is very liable to over-production. We should rather select some varieties of pears that were better keepers.

Mr. Quimby said he had succeeded well in growing pears on sandy soil, with sandy sub-soil. When he bought the place, five years ago, the pears on the place were rapidly drying from blight. He checked the blight by applying one or two bushels of leached ashes around each tree. Others had received the same benefit from leached ashes.

Mr. Craine said that the pear blight had not been so destructive for two or three years.

Mr. Hooker thought fruit growers should be patient and wait. If Mr. Chapin had not kept his trees so thrifty he would have realized more profit from his apple orchard. The fruit crop was liable to glut, but the glut could never last long.

Charles Downing said if he could have but one pear it would be the Beurre Bosc. His second pear would be the Beurre D'Anjou. With him pears had succeeded better than apples. The Lawrence and Dana's Hovey were named as additional pears.

Mr. Barry, Jr., said the Josephine De Malines was a very profitable winter pear, and sells now in New York at $20 a barrel. The tree is a good grower and bearer. Its fine glossy skin makes it more valuable, though many other winter pears were nearly as good. He thought a committee should be appointed to test winter pears. Everybody was planting Bartlett pears, which came into market just at the same time with Southern peaches, and sold at a low price.

Mr. Moody, of Lockport, sold Beurre D'Anjou at home for the Boston market at $20 a barrel.

Mr. Beadle said these same pears sold in Boston at $34 per barrel. The tree is a moderate bearer, and succeeds best on the quince.

Mr. Yeomans said the Beurre D'Anjou did best on the quince. He sold his best at $20 a barrel.

Mr. Chapin sold all his Bartlett pears last year for $9 a barrel, for his entire crop. The Duchess D'Angouleme, carefully selected, sold at $20 a barrel. He thought the Bartlett pears were a profitable crop.

Mayor H. T. Brooks said that apples for marketing should be divided into at least three classes. Our northern species should sell for twice as much as some other

varieties which are not so good. Dealers should pay more for Fameuse and Spitzenbergs than they do, and make them as profitatble as the Baldwins and Greenings. By throwing away all the poor apples, we could get twice or three times as much as we do now.

Mr. T. G. Yeomans, of Walworth, said, while buyers paid as as much for poor as for good, no one would take the trouble to sort them. A fruit grower must either cheat or suffer. He never had sold any apples in the local markets. The farmer who has his apples once opened in the village market can never after get a full price for them. He believed in mixing two qualities of apples. This year apples are so cheap it would hardly pay to sort them carefully, as the first quality paid a little more than the second quality. He shipped to New York, and got better prices for first-class apples there. Each producer should put his name on the barrels.

Express and railroad companies should be required by public opinion to handle choice fruits carefully. He had hired a through car to have grapes and pears carried to New York, but it was overhauled at Albany and the fruit seriously damaged.

Mr. Quimby said that the fruit growers' trials from express companies were such that he had almost despaired. He had to desist from sending grapes to New York city on this account. He hoped this Society would pass resolutions.

Mr. Moony—After we have packed fruit more carefully we should insist that it must be carried better. The trouble was in the method of packing, which was unfair and dishonest. When the Lake Ontario Shore road is put through, railroad agents will be more careful and accommodating.

Mr. Thomas suggested putting up fruit in smaller packages, and packing more carefully. He would pack in half barrels or even smaller measures. He thought that the discussion on apples was discouraging to those who proposed planting.

Forest Trees.

Mr. Harrison, of Painesville, Ohio, was asked to discuss the propagation of forest trees. He is largely engaged in propagating the American chestnut.

Mr. Lay thought the subject of cultivating forest trees was not of much importance here. In the western praries the growth of forest trees was important.

Mr. Thomas thought that crops and fruit crops were benefited by shelter of woods. At present prices of locust posts an hundred acres planted twenty years would be worth one hundred thousand dollars. He thought the planting might be made profitable.

Mr. Harrison said that chestnut trees planted only ten years would grow to a size of one foot in diameter and a proportionate height. The wood is used for furniture and finishing inside work in buildings. The trees will begin to bear nuts six years after planting.

Mr. Downing had chestnuts in bearing five years from planting.

Judge Warner said he had planted the Spanish chestnut, which bore in four years after planting. The common chestnut will grow in twenty years to a diameter of fifteen or sixteen inches. The common chestnut is not so rapid a grower as the birch or silver-leaf maple. Trees from a nursery are better for transplanting.

Among the Flowers; or, Gardening for Ladies.

BY ANNE G. HALE.

VI.

Everlasting Flowers and Their Management.

NO flower garden should be considered complete without an assortment of everlasting or eternal flowers. For their retention of life-like appearance long after the season of growth, and, if properly gathered and dried, their ability to endure great exposure, are qualities valuable enough to entitle this modest sisterhood to as much attention as we pay their more beautiful, yet fragile and fleeting, relatives.

Though devoid of fragrance and of such harsh tissue as to be unsuitable for hand-bouquets, they are very desirable as vase-flowers, and for wall-decorations and other ornamental purposes, especially when living flowers cannot be procured, or, from their susceptibility to decay, would be inappropriate. On festive occasions, within doors, during the winter and early spring, and in all seasons out-of-doors, the continual brightness of their presence is always agreeable; while, for cheering funeral solemnities, or for adorning the burial-places of the dead, their unwithering properties, typical of the unchanging love of the bereaved, and also reminding us of the imperishable glories of the eternal world, seem peculiarly fitted.

The foliage of these plants, of a more succulent nature than their blossoms, withers in drought, and falls at the touch of frost; hence, its place must be supplied with other verdure when the dried blossoms are taken for decorations. This the evergreens furnish; the club-mosses—*Lycopodiums*—suiting well the character of the everlastings. *Lycopodium selago*, the fir evergreen, and *L. dendroideum*—boquet-green, as it is called, because of its extensive use in making bouquets of fresh flowers—are the best for this purpose. They grow in damp woods, particularly among pine trees, and among the roots of hemlocks and spruces. If gathered at any season, and kept in a damp, shady place, they retain their liveliness of hue as well as if growing in their native soil; but the autumn is the best time to secure them—then they are at maturity. They adapt themselves well to cultivation in moist soil, in shady situations, if covered with dead leaves through the cold weather.

Great quantities of lycopodium are in demand in early winter for Christmas decorations, both of churches and dwellings, and the manufacture of memorial devices for the cemeteries. These are generally made entirely of evergreens, or sparingly illuminated with the dried everlastings; as in this crown, where a few immortelles are introduced amid the green with fine effect. Emblems like this can be obtained at the flower stores; or their uncovered frames—wreath, half wreath, cross, crown, anchor, and other shapes—can be procured at the same place, and the evergreen and flowers easily arranged upon them at home by any lady, who will doubtless find it a pleasant task to weave with her own fingers the verdure she has gathered and the flowers she has herself

raised into these offerings of reverent affection for the last resting-place of her loved ones.

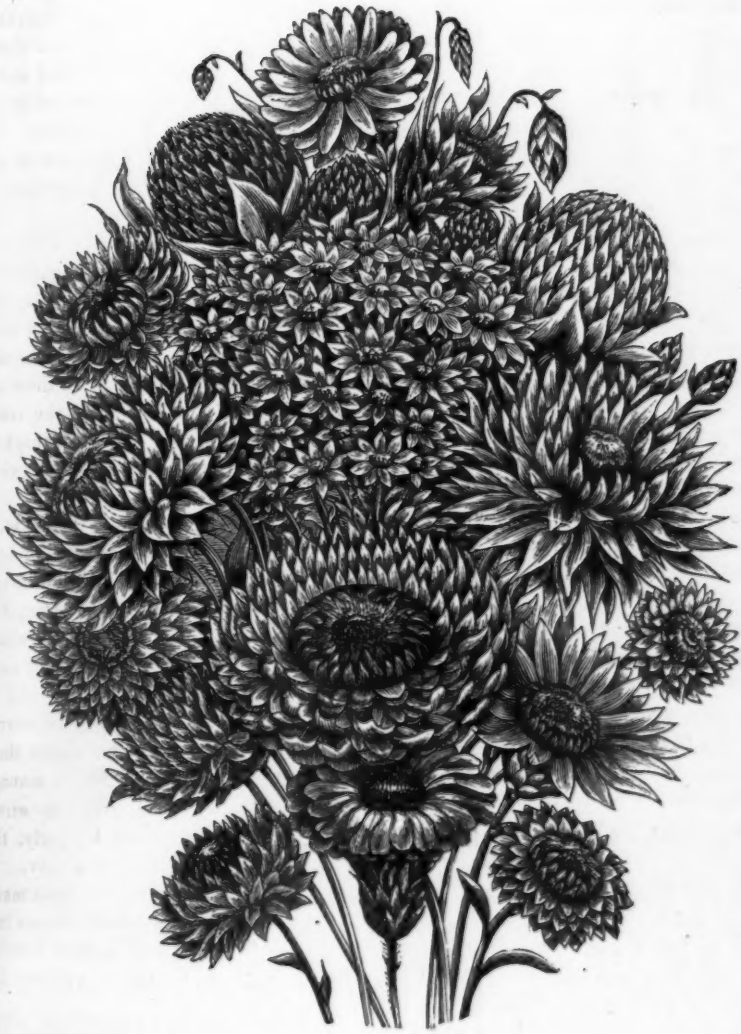
The frames are of stout wire, or of light wood, sometimes overlaid with silver paper or tin-foil; but a coating of green cambric or paper is preferable. To cover a frame, hold it in the left hand; place a few sprigs upon it, in a row, and keep them there, while, with the right hand a cord is passed over their stems, binding them close to the frame; then arrange another row, in such a manner as to hide this cord and the stems of the first, as well as the material of the frame; and so add row after row, mingling flowers with the green, when desired, till the design is completed. Care must be taken to place the sprigs in such a position that the surface presents an even and slightly convex appearance. To effect this it is best to use the lycopodiums in pieces about two inches in length, and to place but few in each row.

For some floral designs, the everlasting flowers alone are needed. This is the case with the French memorial wreaths and crosses, which are made entirely of graphaliums. Adopting the French familiar name, we call the flowers *immortelles;* but they are the same with our common life everlasting, that abounds in rocky pastures and along country roadsides. Antennaria and Filago, branches of the same family, flourish in meadows and sterile fields. The most beautiful of these are, *Antennaria margaritacea*, the pearly everlasting; *Filago germanica*, the cotton rose; and *Graphalium decurrens*, white life everlasting. These all bear transplanting to the garden when in bloom, and, if allowed to remain till the autumn winds scatter the seeds, multiply abundantly.

The flowers should be gathered in August—just before they are fully expanded—by cutting the stalks of the plants two or three inches below each cluster of blossoms. Then, to dry them: knot them, three or four inches apart, head downward, along a strong cord, and hang this cord across a dark, closed room. The cup-like form of the pretty rose-shaped flowers is thus preserved, and also their pearly whiteness. In a week or ten days they will be perfectly dry, and ready to shut away from the dust and dampness, in some tight box or basket, till wanted. Proceed in the same manner when gathering and drying any species of everlasting or eternal flowers, or their buds, and they will be of proper shape and color and retain their beauty for years. When used, their stems, being naturally too flexible to manage easily, must be strengthened by binding to broomstraws or small sticks or wires, with a strip of soft paper or a thread. If the flowers are to be taken singly, the clusters should be divided, and each individual stem improved in this way.

So prevalent is the custom of decorating graves with memorial emblems made mostly or entirely of immortelles, that large quantities of the dried blossoms are imported, and can be purchased at any flower store. They can be had in their natural hue—white; or, dyed—black, lavender, purple pink, green, orange or yellow—for they readily take any common dye.

The forms for making this style of crosses, and other designs of immortelles, are usually of wirework, convex or plano-convex, in the interstices of which the stems of the flowers are placed, the whole presenting an even surface—as in this cross and wreath combined. Sometimes two or more colors are used in the same form, being



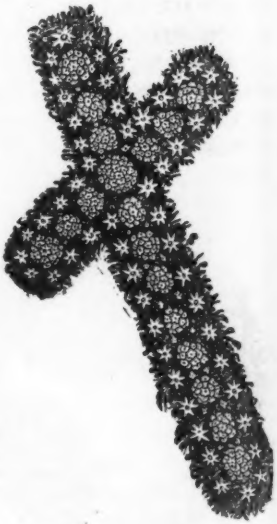
Group of Everlasting Flowers.

arranged to suit the fancy, in bands, rings, spirals, or any other shape—as shown in the annexed figure of a white cross, having a smaller one of black in its centre. On some forms letters, monograms, or other designs are made of silver paper, and so constructed as to rise above the flowers, appearing as if embossed thereon. All of these designs are for sale at the florists' stores, and any person can easily fill them.

Acrocliniums—A. roseum, *A. album*, and *A. altro-roseum*, producing respectively dark pink, white, and light pink blossoms, are very pretty for the garden, or for winter wreaths or bouquets. Plant the seed in May; buds will be seen in August. These are to be gathered and dried before fully expanded, and in the manner directed above for all everlastings.

Ammobium alatum—the winged ammobium of the gardens—needs good soil and a sunny situation. Gather and dry the same as the acrocliniums. It is a very desirable plant.

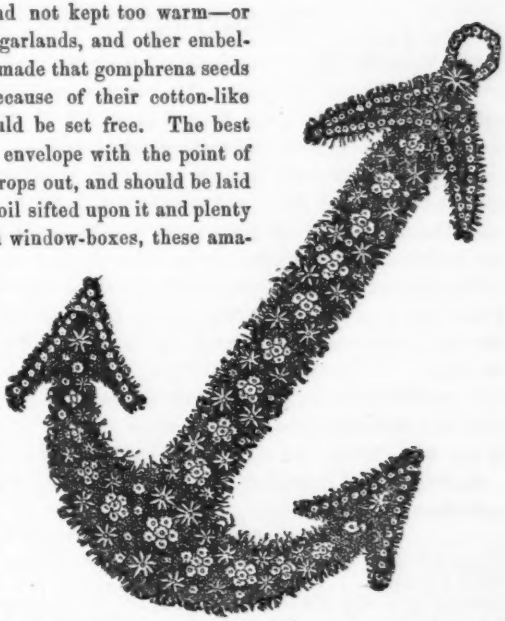
These species of eternals, or everlastings, are excellent flowers to use with immortelles in the fabrication of designs presenting a flat surface, as shown by this cross. A design of this sort is a fine ornament for the parlor wall, or for the church at Christmas, or for a burial-place at any season. If it is intended for out-of-door use the frame should be of wood, and the surface exposed to view covered with lycopodium, or the bright, green wood-moss; the French moss, dried and dyed a brilliant green, may be bought at flower stores. The lycopodium for this purpose should be of the most delicate sort—just its tips about an inch in length—and this or the moss glued to the wood; then, immortelles in clusters, cut from their stalk and glued among the evergreens or moss; and acrocliniums and ammobiums the same, as represented in the cut. The bits of lycopodium should be overlaid neatly.



When such a design is intended for in-door decoration, or can be kept from dampness, the evergreen or moss and flowers can be pasted or gummed to the frame, which will be sufficiently substantial cut from book or box board. Any design requiring great precision and neatness of workmanship, as this anchor—the emblem of hope—the beauty of which depends greatly upon the nicety with which its points are finished, is most properly made of box board, and pasted or sewed, the flowers being immortelles, both separate and clustered; ammobiums and acrocliniums, buds and blossoms.

Gomphrena globosa, the old-fashioned globe amaranth, is as good and as pretty as it ever was for the garden, as a window plant—growing all winter if taken within

doors before the frost comes, and not kept too warm—or as a dried flower for bouquets, garlands, and other embellishments. Complaint is often made that gomphrena seeds do not germinate. This is because of their cotton-like envelope, from which they should be set free. The best way to do this is to open each envelope with the point of a fine needle. The seed then drops out, and should be laid on warm, mellow soil, a little soil sifted upon it and plenty of sun given it. If started in window-boxes, these amaranths gain time for abundance of bloom. This should be done early in spring, and the young gomphrenas transplanted to a garden bed in May. Set them a foot apart. *Gomphrena globosa rubra*, with deep crimson flowers, is the most common, and a fine variety. *G. g. alba*, pure white, is very handsome; also *G. aurea superba*, with orange yellow flowers. But the white should be planted some distance—several yards—from the crimson or the orange, or its blossoms will get discolored and dingy. The blush-colored and red and white variegated are sometimes clear and distinct in their hues, but they cannot be depended upon.



The gomphrenas, especially G. globosa rubra, form an elegant contrast with clusters of immortelles in Christmas or in memorial wreaths. The accompanying engraving shows how they should be disposed among the greenery. This style of wreath, its foundation being a ring of stout wire, bamboo, ash, or other light wood, is made in the same way as the crown. (See illustration near the commencement of this paper.) The flowers, however, may be either bound in with the lycopodium, or, after the frame is finished in evergreen, sewed among the sprigs. Letters, monograms and long garlands, or "festooning," are made in the same way. for church or parlor walls.

(TO BE CONTINUED.)

Beautifying Country Homes.

MR. WEIDENMAN has done excellent service to the public in his superb work on Landscape Gardening. He remarks, with truth, that "all cannot enjoy the privilege of a stroll in the king of parks, the Central Park of New York. Comparatively, few can view its extended lawns, or its bold cliffs and caves, admire its triumphs of architectural taste, or note how the skillful artist has converted a vast plain into hills and dales, and varied it with lakes and cascades, shady founts and open lawns. But all can make their country homes attractive and lovely, and enjoy the beauties of nature about their own house and fireside."

The present volume is intended by the author specially to show how to lay out a good plan of grounds, with the cost of carrying out necessary improvements, and the yearly expense in keeping them in good order. Connected with all this are the details of choosing a good location; then how to secure a perfect drainage; next, the construction of roads, and their grading, and finally how to plant the shrubs or trees, and how to seed or dress down the lawns. All these points occupy forty pages of the work, which is divided somewhat as follows:

Seeding down Lawns gives the best varieties of grasses, and he advises selections as follows:

For Fine Lawns Frequently Mown.

Crested Dogs Tail	10 pounds.
Hard Fescue	4 "
Slender Leaf Sheep's Fescue	2 "
Perennial Rye Grass	10 "
Wood Meadow Grass	2 "
Rough Stalked Meadow Grass	1 "
Yellow Oat Grass	1 "
June Grass	8 "
White Clover	8 "
Total	46 "

For Permanent Lawn Pastures.

Meadow Fox Tail	1 pound.
Sweet Scented Vernal Grass	1 "
Orchard Grass	3 "
Hard Fescue	2 "
Sheep's Fescue	2 "
Meadow Fescue	2 "
Italian Rye Grass	6 "
Perennial Rye Grass	4 "
Timothy	7 "
Red Top	3 "
Rough Stalked Meadow Grass	3 "
Yellow Oat Grass	1 "
Red Clover	2 "
Perennial Red Clover	2 "
White Clover	4 "
Total	43 "

This, we suppose, he intends to be the application to each acre, to be sown early in the fall, say September. As an illustration of a beautiful lawn the enclosed sketch is introduced, representing the pleasure grounds of H. E. Sargeant, Esq., Southampton, Mass.

One of the most valuable chapters is devoted to Drainage, excellent plans being given for the position of the drains and their outlet. Suggestions are given on the making of roads, drives and walks, and plans for laying the curves or grades properly. We are glad to see a chapter on fences, walls and hedges.

He expresses great favor for *wire fences*. "They have been rapidly adopted in Europe, and special attention was paid to them at the late Universal Exhibition in Paris. Their durability, lightness and little cost, place them above all others. Being almost imperceptible, they do not obstruct the view on ornamental grounds, while they possess all the desirable qualities of a good fence. They will soon gain the favor here they merit."

"Picket fences are objectionable for truly ornamental purposes. They are costly, requiring, if well kept up, annual painting, frequent repairs, and rebuilding; and if kept in the best order, are repulsive as well as stiff and unnatural."

We can hardly endorse his objection on picket fences, for there is a kind of ornamental architecture in their construction and appearance which more than makes up for the often time barrenness of duration inside. Wire fences are very suitable as side divisions of land and lots, but not for frontage purposes. The best of all fences is a neat, well-trimmed hedge, and we can heartily join him and his commendation of their use.

Six pages of the work are devoted to a list of trees and shrubs, deciduous and evergreen, very convenient for reference. Some practical examples are wisely given upon the important subject of *grouping*. One of the most beautiful illustrations of the entire work is that of a vase with a dense back-ground of low shrubs and latter evergreens, neatly grouped together.

After a few practical directions about transplanting trees and shrubs, he introduces some charming views of water scenery, rustic seats, rustic pavilions, plans for flower gardens and burial lots. The larger part of the work is occupied by colored lithographic plates of plans for laying out places of small or large extent, exceedingly well executed, numbering twenty-four in all. This work fills a special field in volumes devoted to rural ornament. Its colored illustrations are attractive, new, and representative of many existing examples of landscape gardening. The author estimates and hints—given in a better form than can be gained elsewhere—some practical idea of what will be the cost of improving and adorning one's home grounds.

We are indebted to the publishers, Orange, Judd & Co., for the accompanying illustrations, which are selected from the pages of the book.

Editorial Notes.

A Home among the Evergreens.

A pleasant visit of an hour or two was afforded us lately at the farm and nursery grounds of Robert Douglass & Sons, Waukegan, Illinois. Mr. Douglass' residence is surrounded on all sides by evergreens, and windbreaks of various descriptions, and the contrast betwixt the roaring piercing wind without, and the calm mild air within the charmed hall, gave a feeling of great comfort. We see here specimens of the Larch, Norway Spruce, and numerous Pines as ornamental trees. Some of them are of remarkable growth. The Larch is particularly noticeable for the circumference of its trunk close to the ground, and the Norway Spruce for its stateliness and graceful drooping habit.

The firm occupy four farms of twenty-three acres each, in their nursery operations, of which sixteen acres are under shade, covered over with evergreen boughs suspended by cross bars and timbers nailed to posts set fifteen feet apart over the entire seed bed. Here were seen young trees one year old of Norway Spruce, Scotch Pine, Austrian Pine, Larch, &c., in great profusion. The firm raise 10,000,000 plants of the European Larch every year, and other plants by the millions also not to be counted. The largeness of their trade may be estimated from the fact that they import and plant yearly 2,700 pounds of tree seeds.

One peculiarity of the tree trade, which is now assuming vast proportion, is that so much trade is sought for from the East. One lot of 50,000 plants of the Mountain Ash was ordered as far east as Lowell, Mass., while shipments are frequent as far as Geneva and Central New York.

This looks as though our Eastern people must have skipped beyond our Eastern nurseries and found it more advantageous as well as economical to send to the distant West for their supplies. It indicates, however, a growing taste for tree planting all over the country, which is very encouraging.

Still another peculiarity we learned, and that is, Pear seed can be imported from Europe, planted on the Western prairies, and plants raised and sold at about one-third cheaper than the same can be done in the East.

This nursery of Messrs. Douglass & Sons is the largest in the country, and they inform us that the trade develops with astonishing rapidity every year.

Western farmers seem to have settled quietly down to the conviction that fruit trees cannot be successfully and profitably grown without first planting a cordon of timber trees, belts and screens to protect them, while others seem to recognize the *money value* of trees, and enhance the worth of the property a hundred fold, by the free planting of ornamental as well as useful trees.

The Messrs. Douglass are doing an excellent work.

Barry's Fruit Garden.

A new edition of this old standard volume will be issued the coming summer. Mr. Barry has revised it and added much new matter and illustration. It is a work we have always held in high appreciation, and are glad that its author has at last been induced to re-issue it in an improved form.

Beautiful Floral Plate.

The new Catalogue of Mr. John Saul, of Washington, D. C., contains a colored plate of two new Geraniums, Lady Edith and Coleshill. The plate is superbly colored and printed, and is by far the finest specimen of floral lithograph work we have ever seen in this country.

Pacific Rural Press.

Messrs. Dewey & Co., of the *Scientific Press*, San Francisco, Cal., established a Weekly Family and Rural Journal, in California, about six months ago. Mr. W. H. Murray, one of the firm, informs us, while here on a visit, that it is a complete success, having attained the largest circulation of any Agricultural paper on the coast,

and is in a prosperous condition. Without flattery, we express our candid conviction, that it is the best edited Agricultural Journal of that State, and alive to the important subjects of the times. Its pages are always pleasant and instructive. Price four dollars per year.

Failure of Agricultural Journals.

The Rural Gentleman, Baltimore, Md. *The American Farmer*, Baltimore, Md.

Changes.

The Southern Horticulturist is now changed from magazine to quarto form, its name to *Swazey's Southern Gardener*, and its price to two dollars per year.

Briggs' Colored Chromo,

sent us by Briggs & Bro., Rochester, N. Y., contains forty-three varieties of flowers. Some of them exquisitely colored. Really a fine and desirable colored plate. The new Floral Catalogue of this firm contains 112 pages of closely printed matter, and is embellished with over 400 illustrations entirely new. It is not generally known that this firm does the largest business of vegetable seeds in packets for country stores, in the entire United States. Their business is very profitable.

Clianthus Dampierii.

John Saul says, in his Catalogue, that "the seed will be found more satisfactory than plants. Sow in a warm situation out doors, about the middle of May; do not transplant nor attempt to grow in pots. If sown in a moderately rich, dry soil, it will spread considerably over the ground during the summer, giving a constant succession of its beautiful flowers, which are large and gracefully drooping clusters of brilliant self-crimson scarlet flowers, marked with a rich black boss-like blotch in front."

News to Florists.

A writer in *Harper's Bazar* says, "the florists of this country devote but little attention to this branch of floriculture (roses.)" This is certainly news to us, for it is well known that roses are always a staple stock in trade in every well regulated green-house or floricultural garden. Some even make the culture of roses a leading speciality, with eminent success. And all admit that roses form one of the most favorite purchases of ladies, and usually at very remunerative prices.

The same Journal adds: "We would, however, caution our amateur gardeners not to buy grafted roses, whether as standards, half standards or dwarfs. In Europe it is the universal practice to bud or graft roses in this way; the florists do this in order to multiply a new variety more rapidly than they could otherwise do it, as every bud will produce a plant. The standards and half standards have a miserable existence for two or three years, and then die, our hot sun making the tall stem so hide-bound that at last the grafted top can get no supply of sap through it. Tying moss around, and similar devices have been tried to obviate this difficulty, but they do injury in another way, by excluding the air from the stem, which is almost as injurious as the heat of the sun. Roses budded as dwarf, are as a general rule, a nuisance, for the stock has a constant tendency to throw up suckers, which, if not immediately removed, rob the graft; and even with this care, the continual endeavor of the plant to expand its energies in this way, is a great drawback to the proper development of the graft. Some say that many varieties produce finer flowers or stocks than they do on their own roots, to which we have only to say, that a rose which, with good cultivation, will not produce fine flowers when grown on its own roots, is not worth having for general cultivation."

How to plant Pear Trees.

The holes should be a foot deep and three feet across; they may be mostly made by the plough or by the spade, as each person finds handiest. For standards twelve to sixteen feet, and dwarfs ten feet apart, gives sufficient room for them to grow in

ordinary soils. It will require 226 trees of the former, and 435 of the latter, at these distances for an acre. Two persons are required to set trees where there is any number, one to hold the tree upright; shake it gently up and down to settle the soil around the roots, and when the hole is half filled, to tramp it firm; the other to shovel in the earth, the fine top soil around the roots, the subsoil on the top; broken bones and ashes may be mixed in, but no manure should be allowed to come in contact with the roots; if it is used, place it on the surface, around the tree. If the roots are broken or bruised, trim them with a clean cut from the underside, and if the roots are not entire, prune the top so as to establish the balance in favor of the roots. Standards should be set two and dwarfs four inches deeper than they stood in the nursery, so that in the latter case the pear stock may throw out roots and become standards.—*Watertown Times.*

Cure for the Peach Borer.

M. B. Bateham says, that after two years trial of Carbolic Soap, he feels quite safe in recommending its use as the cheapest and best method yet found for the prevention of injury by the peach borer, and presumes that it will be equally as efficacious for the apple borer. His method of using is as follows: "Take a five pound can of the soap (costing only $2), and turn it into a barrel one-third full of hot water; stir it occasionally and let it stand a few hours, or over night, for the soap to dissolve; then fill up the barrel with cold water—or I sometimes use soapsuds from the kitchen for this purpose. The liquid is now fit for use. It is of a milky appearance, and pungent but not offensive odor. It is too strong for using on plants, but will not hurt the bark or wood of trees, applied with a paint brush around the base of the trees, taking care to have the liquid enter all crevices; it immediately destroys all the insect-eggs that have been deposited, and any young worms which have not penetrated further than the bark; and I believe that for some weeks at least, unless heavy rains occur, the odor prevents the moth from depositing eggs. One application in July or early in August is sufficient. The barrel of liquid described is sufficient for a thousand trees of bearing size, and an active lad can do the work in two days."

Mr. Bateham's suggestions are valuable, and we endorse his method, but think five pounds is too much for one barrel; it had better go over two barrels. If this strong liquid, in one barrel only, comes in direct contact with any tender roots, it will surely kill them; but if dissolved a little more, then it will do the same work of destruction to eggs, with less danger to the trees.

Salvia Splendens.

Mr. Henderson says, "this is perhaps the most gorgeous plant of our gardens; single plants often attain a height of six feet, and nearly as much in diameter, having a hundred scarlet plume-like flower spikes; the color is so intense when seen against a green background, that it is often visible at the distance of half a mile. Seeds sown in April in the green-house will flower in July and August."

Lady Banks' Rose.

The Agriculturist says: "The Banksian Rose was so named in honor of the wife of Sir Joseph Banks, upon its introduction from China into England in 1807. The plant is a vigorous climber, attaining the height of thirty to fifty feet. Unfortunately it is not hardy in the Northern States, but our friends at the South can avail themselves of it as a most charming plant with which to ornament the pillars to their verandas. The flowers are only about half an inch across, and grow in clusters, which are produced most profusely. It blooms only once a year."

Pruning Spiræas.

It may not be generally known that the different varieties of Spiræas must not be pruned at the same period, and that the success in bringing their blossoms to great-

est perfection will depend on the time chosen for this operation. We therefore give the following list, noting the time when to prune, compiled by Mr. Billiard, the best authority for this species of shrubs:

1. Varieties to prune in early spring: Spiraea Salcifolia Alba, Rosea, Laciniata, Billiasdii, Longiflora, Canadensis Rosea, Canadensis Alba, Douglasii Floribunda, Corymbosa, Regeliana, Semperflorens, Fortuni (Callosa), Paniculata, Alba, Foliisvarieg, Excinnia, Californica, Tomentosa, Rosea Grandiflora, Pachystachys, Noblena, Gontieri, Californica Species Nova.

2. Varieties to be pruned after they are done blossoming: Spiraea Thalictroides, Sorbifolia, Picowensis, Ariaefolia, Nicondertii, Aquilegifolia, Sinensis, Expansa Nivea, Lindeyana, Opulifolia, Laevigata, Bella Rosa, Prunifolia, Prunifolia Flora Pleno, Lanceolata (Reevesii), Reevesii Flora Pleno, Reevesii Nova, Ulmifolia, Pubescens, Crenulata, Cana, Adiantifolia Chamædryfolia, Blumii, Kamoon, Kamoon Spicata, Rupestris, Alpina, Oblongifolia, Amoena, Hypericifolia, Procumbens, Grandiflora (Exocordia), Speciosa, Confusa, Thunbergii, Hookeri.—*The Ruralist.*

Strawberries.

Louis Ritz mentions the following as the best of his collection, and also prescribes the soil best suited for their culture:

Fillmore, P.—Large to very large; productive; dark color; showy; sweet; rich apricot flavor; rich stiff clay.

Boyden's No. 30, *H.*—Large to very large; very healthy plant; productive; sprightly; acidulate; juicy; rich sandy or clay loam.

Chas. Downing, H.—Large, productive, juicy, sweet, excellent; rich clay loam, rather compact.

Triumph De Gand and Romeyn's Seedling.

I place these two, as similar in every respect, under one heading; the only difference is, that the Romeyn proves a better bearer, under every treatment, than the Triumph. Large, productive, juicy, with a rich, peculiar, aromatic flower; rich clay loam.

Kentucky, H.—Very late; productive; large; acidulate; not high, but good flavor; clay loam.

Napoleon III., H. Large; productive; slightly acidulate; very aromatic; rich clay loam.

I speak thus far of amateurs who want to plant several varieties. Some of our readers, however may only be able to allow a small space to a strawberry bed, and they may do better with one variety. If their soil is sand with sandy loam, they may plant the Agriculturist or the "Green Prolific," the former being of rather better flavor, the latter more acid, but at the same time more showy and immensely productive. Pistillates should be planted among hermaphrodites, and the proportion should be ten of the latter to one hundred of the former. It is immaterial whether they stand close or ten to forty feet distant, as the wind will carry the pollen.—*Louis Ritz.*

Borders for Cold Graperies.

Dr. Nichols, of the Boston *Journal of Chemistry*, made an analysis of the ash of home cuttings of a Black Hamburg Grape vine, with the following results: Potash, 29 parts in 100; phosphate of lime, 19 parts in 100; carbonate of lime, 13 parts in 100; soda, 3 parts in 100; magnesia, 4 parts in 100; with small quantities of iron, manganese, silex, etc. The fruit evaporated to dryness, and ignited to obtain the ash, gave of—potash, 34 parts in 100; phosphate of lime, 11 parts in 100; carbonate of lime, 9 parts in 100, with small amounts of earthy substances. From these results he finds mineral food, which the vine and its fruit require in the largest quantity, is, first, potash; second, phosphoric acid; and, third, lime. For a border of thirty vines, at least a barrel of bone dust and six to eight of ashes should be used; about three

pounds of Epsom salts (sulphate of magnesia) and five of sal-soda (carbonate of soda) will be required for each barrel. A layer of soil should be placed between each two layers of the bone, ashes and lime. The layers of ashes should be thicker than of the bone dust.

Window Gardening.

A lady gardener says: "No plants ever gave me more pleasure, for winter flowering, than the maple geranium and the crocuses and hyacinths I had last winter. I place part of my hyacinths in glasses, with well water enough to just touch the bulbs, and let it remain until the roots reach the bottom of the glass, unless it begins to look woolly, when I change it; then I bring them out of the dark cellar and keep them in a room that will not freeze, changing the water once a week, and being careful to have it of the same temperature put in as that removed. The remainder of my hyacinths and crocuses for winter I put in boxes, small pots, etc., containing sandy soil, and let them remain until the roots are well started; then bring them up; water occasionally with liquid manure, and after the hyacinth trusses appear, sprinkle daily."

Grimes' Golden Apple.

This is growing immensely in popularity. Nurserymen tell us that the stock is rapidly sold and orders are unlimited. This is very flattering to the introducer, and yet not more than it deserves. The fruit is certainly excellent—a good keeper, and of good quality. Those who want to plant a tree *sure to bear* had better look after this.

Profits of Chestnut Raising for Nuts and Timber.

An acre of chestnut trees planted for timber will accommodate about 1,600 trees. In ten years' time they will be worth from $1 to $3 per tree, or $1,600 to $5,000 per acre. But if planted for nuts, at 20 feet apart, there will be 100 trees, each good to yield one-half bushel to each tree, or, at $5 per bushel, $250 per acre. Add to this the value of each tree for timber purposes, and in less than ten years' time a fortune is available for any enterprising timber planter of 50 or 100 acres, of from $25,000 to $100,000. Why are our people so slow to appreciate the necessity and profits of forest tree culture?

Select Small, in Preference to Large, Evergreens.

The growth of small as compared with large trees, transplanted at the same time, produces some very curious results, which might puzzle those not sufficiently familiar with horticultural science. We have a good example at hand. An experienced horticulturist says: "About twelve years ago a large evergreen was transplanted by a friend of ours into his garden. It was about twelve feet high, and great care was taken of it. At the same time we set out a small one, about eighteen inches in height. Now, what do you think is the difference between the two trees at the present time? The large tree has grown about four feet. The small one is twenty feet high. The large one has become the small, and the small the large. It is a good illustration of the imprudence of selecting too large trees. If we could plant seeds of the trees we desired, in the places where we wanted them to form an orchard, such trees would be more healthy and much longer-lived than transplanting trees can be; but this is a condition of things not easily attained. We should, therefore, adopt the nearest approach to it, and set our young, thrifty plants, with all their fibrous roots untrimmed, that will adapt themselves to the conditions in which they are placed, and that will, in the course of time, form a valuable orchard. Could we take up large trees with their roots, and a ball of earth with each tree, then such trees would not meet with a check, and a gain of time would be the result; but this is seldom the case, and the better course is to plant out small specimens."

Double Purple Wistaria.

Francis Parkman says, in *The Journal of Horticulture:* "Several years ago we received from Japan a small plant in a pot. It was without name, but was evidently

some species of Wistaria. It grew with the greatest vigor, till its longest shoots measured more than thirty feet from the ground. Last season it bloomed for the first time. From the character of its foliage we had supposed it to be the white variety of *W. sinensis*, and we were almost as much surprised as gratified when we saw it hung with long pendent clusters of perfectly double flowers, a shade deeper in color than the common single Wistaria. In short, we found ourselves in possession of a novelty of the first order, which, so far as we know, has not yet appeared in the catalogues of any European nurseryman. The depth of the color of the flowers, the compactness and length of the clusters, and the vigorous, hardy character of the plant—which has stood three winters totally unprotected, and without the slightest injury—make it an invaluable addition to the list of hardy climbers."

Grafting Grape Vines.

At a recent meeting of the Horticultural Society of Western New York, D. S. Wagener gave a description of the method he adopts in grafting the grape vine. He grafts from early spring till last of June. The grafts are cut early the previous winter and packed in saw-dust. He grafts a little below the ordinary surface of the ground and covers with earth. The moisture of the soil is preserved by two inches of mulching. The cleft is sawn in without splitting. He has set the Delaware and Isabella roots with good success, and in one instance had a crop of grapes the same year. A strong stock desirable, such as Isabella, Catawba and Diana .The Rebecca does better on a strong stock than on its own roots.

Plant More Standard Pears, and Less Dwarf.

A correspondent of the *N. E. Homestead* writes as follows: "I was told that Louise Bonne and Duchess were better on quince, with some others, as Napoleon, d'Amalis, Belle Lucrative, etc. I purchased them and set them carefully, mulched, hoed and pruned, and ate of the fruit. I set at the same time standards of Bartletts, Flemish Beauties, d'Anjous, Seckles, Virgalieus, Winter Nellis, Vicars, etc. Now, after fifteen years, where are the dwarfs, and where are the standards? Most of the dwarfs have gone under, and most of the standards are doing well, and one of the standards is worth to-day more than all the dwarfs I ever planted, and I have set hundreds. I have budded dwarfs, and bought dwarfs, and fine ones, too; have given them the best ground and best care, yet failed almost entirely. I say, Mr. Editor, I have no patience with a dwarf in fruit culture or mind culture; the return is meagre and unrequiting. I have tried dwarf peaches, cherries and apples; all are delusive. Apples dwarfed might pay if the fruit would bring $5 per bushel, for *they* seem hardy. Now for the standard pears. I have had some seventy-five or eighty varieties in my garden. The Bartlett, Flemish Beauty, Napoleon Rostiezer and some others are scarcely more tardy in coming into bearing on their own stock than on quince. Just give them a good start and they will go ahead, outlive us and the next generation."

Editorial Note.—Dwarf Pears in the Middle and Southern States are a great success, and very profitable. In the Eastern States, we have no doubt, standards are far more satisfactory than dwarfs.

Gardening in Germany.

Erfurt is called the "Garden City of Germany." The area devoted to horticulture in and around that city is 1,200 acres, of which 400 are market gardens. There are twenty-seven men who do a wholesale trade, besides 120 market gardeners, who employ, in all, over 500 hands. Over 300,000 catalogues and price lists are annually printed.

Curiosities of Plant Life.

A farmer once noticed that some elm trees, growing by the roadside, sent their roots into his wheat field, and robbed it of its best fertility. To obviate this, he dug a deep trench between the elms and his field, and all the roots running in the

latter, were chopped through. However, in vain. The severed roots now struck downward on this side of the trench, reached the bottom, and undermining it, passed through the clay and came up on the other side of the loam, and thus regained for themselves their former domain, the wheat field. The farmer did not make a second attempt; the elm trees with their knowledge amazed him, and he resigned to them exclusively that strip of his field.

New Lilies.

The Florist and Pomologist speaks of several new lilies. "One of them is the *L. tigrinum Fortunei*, introduced by Mr. Fortune from China. This is remarkable for its vigorous growth, and its immense head of flowers, which branches out in three successive series from the main stem, by which the blossoming season is prolonged. Another is the *L. tigrinum Splendens*, introduced to public notice by M. Van Houtte, and which in its taller stature, and ample branching inflorescence, bears considerable resemblance to the *Fortunei*, but is said to differ somewhat in color, and in the fewer and more prominent spots on the perianth. Both are grand additions to the groups of bulbous plants."

Apples in the North-West.

A correspondent of the *Chicago Tribune* says: Last week I spent half a day in the Chicago apple market. The result was that, out of more than 2,000 of known named varieties, two varieties stood prominent, nearly monopolizing the market; the Baldwin and Rhode Island Greening, or Greening for short. Esopus, Spitzenberg, Northern Spy and Roxbury Russett, came next. Five varieties composed the list. An occasional barrel of Yellow Bellflower, Black Gilliflower, etc., composed the entire collection; not twenty in all. I did not see an Illinois grown apple in the market, Michigan and New York supplying the market. In those States the crop was an unusually good one the past season, while west of the lakes the crop was of an inferior quality, and has been used to supply the local demand. The prairie orchards would have shown Jonathan, Winesap, Ben Davis and Willow Twig. If the great apple regions of New York and Michigan can afford to grow only fine varieties for market, we can certainly be content with what we have, until others shall have been tested. The man who plants the new varieties, as a general thing, must buy his apples. It is this mania for new varieties that has done more to ruin Western orchards than all other obstacles put together.

How to destroy Insects in your Orchards.

The address of J. W. Robson before the Jo Daviess County (Illinois) Horticultural Society, has some excellent points relating to orchard culture, and especially the depredations of insects, and he recommends every orchardist to observe these few details every season:

"1st. Encourage the black-cap titmouse and the hairy woodpecker, which destroy the insect in the pupa state.

2d. Light small bonfires in the orchard, on dark nights, after the sun has set. This will destroy the moth.

3d. Pick up wormy fruit as soon as it falls, run it right through the cider mill, or throw it to the hogs to be eaten.

4th. Strips of woolen cloth tied around the trunks when the trees are in bloom, and examined twice a week, will destroy those that have escaped and crawled there for shelter. They will be found generally in a transformation state, between worm and pupa.

5th. Place a bunch of weeds or soft hay in the crotch of the tree at the same time, and examine frequently. You have only to look at these dishes of beautiful fruit, to see how this insect destroys the appearance and lessens the market value of the apple.

Brother Horticulturists, up and be doing, bearing in mind that eternal vigilance is the price of handsome, perfect fruit!"

Distance for Grape Vines.

The proper distance apart to plant grape vines will depend very much upon the system to be adopted in pruning and training. We think that eight feet by six is enough room to give any variety; but others think differently, and advise planting sixteen feet apart. If a man owns plenty of land, and wishes to count acres of vineyards instead of tons of fruit per acre, then wide planting is just the thing for him to do. But we have always noticed that the more experience a man has, both in study and practice, the less likely is he to spread a few vines over a great deal of land. Plant close, and prune close, and thereby receive an early return on your investment, and at the same time keep your vines under control. This advice is given because asked for; but it would be well for you to expend a few dollars in books on grape culture, and study principles as well as the practice of the various writers on this subject.—*Ex.*

Ohio Everbearing Raspberry.

A writer in *The Country Gentleman* vindicates the Ohio Everbearing Raspberry. He says: "Its habits of bearing moderate crops during the latter part of summer, caused it to be designated 'Everbearing.' The everbearing varieties have not generally given satisfaction to profit-seeking cultivators. Had it been known simply as the 'Ohio,' and been planted and cultivated for one crop early in the summer, as with the Doolittle, Philadelphia and others, it would have made for itself a reputation second to no other variety for hardihood and productiveness. We have grown it for some fifteen years, and it repeatedly yielded at the rate of one hundred bushels per acre, and then carried a moderate crop later in the summer on the current season's growth of cane. We planted three feet apart in the row, and rows seven feet apart; cut the canes back in the spring to three and a-half feet, and secured to horizontal poles. For their yield during the regular raspberry season we put them against all others—then we have the summer and autumn yield beside."

Another writer in the *Ohio Farmer* says: "I was reading somewhere an opinion expressed that the everbearing raspberry is a poor bearer, but my experience does not accord with this, because for the last ten years I have had a full supply for three successive months, save the season just past, when the crop was greatly injured by the drouth. I believe that twenty hills of the everbearing raspberry will supply any *common* family. I have tried eight or ten other kinds, but find none so good as this. The fruit is black, well flavored, and bears from the last week in June until the middle of October."

The Trophy Tomato.

George W. Wilson, of Ohio, writes to *The Rural New Yorker:* "Last spring I received a package of the Trophy Tomato seed, which were planted in a hot-bed, and the plants grew vigorously. The fruit ripened very early. One tomato, not the largest on the vines, measured sixteen inches in circumference. Most of the tomatoes are smooth as an apple and very solid, containing few seeds, and cutting like a round of beefsteak. To sum up—the vines are vigorous growers and enormous bearers, while the fruit is large and smooth, ripening unusually early and being very solid, so that little goes to waste in cooking; and in flavor it is all that can be desired."

Killing Currant Worms.

Mr. J. L. Stickney, of Wauwatosa, Wis., says a neighbor applied *Paris Green* to his bushes. It was mixed with four times its weight of flour, and very thoroughly applied; it killed the worms, sure enough, but it killed the plants also. He adds, however, the following comments:

Should I have occasion to again use the Green, I should mix with ten or fifteen times its weight of freshly slacked lime, or if this was not at hand, with fine ashes, and apply more sparingly. The Green should, of course, only be applied to young plants where there is no fruit.

When circumstances are favorable, very good execution may be done by shaking

the worms on the ground when the sun is shining very bright and warm, say from eleven to one o'clock on a cloudless day. The heat of the soil and of the sun will quiet them in one minute. This can only be done where the soil is free from weeds or grass, and where the currants themselves do not shade too much. The worms are very delicate and tender, and the heat of the soil and sun is intense—decidedly more than they can bear. With heat, Paris Green and Hellebore, and with early and earnest attention—this last most important of all—we have little to fear from currant worms.

When we recall our currants from the fence corners and neglected places, and plant them as they should be, in a block by themselves, we may easily confine fowls among them before the fruit matures and after it is gathered. These will effectually destroy all injurious insects.

The Green Prolific Strawberry.

The credit for this should have been given to Seth Boyden, of Newark, N. J. Our October article had one too many varieties in its list. The Green Prolific Strawberry is one of our favorite varieties, grows finely on sandy soil, and we have never heard of an instance where it failed to yield a crop. Sometimes its flavor is quite sour, but when well ripened, it has sub-acidity very agreeable. It is one of the most creditable of the Boyden seedling, and, with the AGRICULTURIST, and No. 30, he might well feel proud of having introduced some new and worthy fruits in the horticultural world.

Todd's Apple Culturist.

With the exception of a few instances of unnecessary prolixity of description, and the habit of giving free notices, or advertisements of sundry agricultural implements and warehouses, which no author ought to introduce into his works, this volume—*The Apple Culturist*—is not only the best of Mr. Todd's works, but is the most practical work on Apple culture yet published in this country, and well adapted to the use of every farmer. The publishers (Harper & Bros.) have done their work handsomely, filling it with a profusion of engravings of great interest, and a material help to the body of reading matter. If the faults we have named could be corrected, we see no reason why it should not be acknowledged of a meritorious rank with any of the standard agricultural publications of the day.

Editorial Notices.

Every Woman Her Own Flower Gardener.

A charming little book on Flowers and Out-door Work for Ladies, has been written by "Daisy Eyebright," and the manuscript placed in our hands for publication. The author, within a space of fifteen to twenty chapters, talks pleasantly of Geraniums, Fuchsias, Ribbon Beds, Bulbs, Ornamental Grasses, Roses, Flowering Shrubs, Climbing Vines, Ornamental Plants, Garden Vegetables, and a variety of other subjects. It is intended especially as a help to ladies in out-door gardening, and can hardly fail to be universally liked. Printed in excellent taste, and will be issude from office of THE HORTICULTURIST, June 15th. Price, 50 cents.

Vick's Floral Plate.

We have been favored with an elegant Colored Floral Plate, handsomely framed in black walnut, from the cordial hand of James Vick, Esq., Rochester, New York. It is the finest of all his achievements in this direction to the present time, and most admirable in conception and execution. The flowers are brought out into startling distinctness, and grouped in the most tasteful positions. It hangs in our office in a prominent place, and attracts the special attention of every visitor. It is no wonder that the public are so liberal patrons of so liberal a man. His issue of Catalogues for the Spring campaign was 185,000, and 125 hands were employed in filling orders for seeds. Next year he expects to issue 250,000 catalogues.